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08/421,810 04/13/95 CONRAD

A 20259-14

EXAMINER
HOLLOWAY III, E

B2M1/0609

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2711

DATE MAILED: 08/08/95

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 4-13-95 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input checked="" type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> |

Part II SUMMARY OF ACTION

1. ☒ Claims 1 and 49-71 are pending in the application.

Of the above, claims are withdrawn from consideration.

2. ☐ Claims have been cancelled.

3. ☐ Claims are allowed.

4. ☒ Claims 1 and 49-71 are rejected.

5. ☐ Claims are objected to.

6. ☐ Claims are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on Under 37 C.F.R. 1.84 these drawings are ☐ acceptable, ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on has (have) been ☐ approved by the examiner, ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed on, has been ☐ approved, ☐ disapproved (see explanation).

12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. ; filed on

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

EXAMINER'S RESPONSE

1. In response to the application filed 4-13-95, the application has been examined. The examiner has considered the presentation of claims in view of the disclosure and the present
5 state of the prior art. And it is the examiner's opinion that the claims are unpatentable for the reasons set forth in this Office action:

OBVIOUS DOUBLE PATENTING REJECTION

2. Claims 1 and 49-71 are under the judicially created doctrine
10 of obviousness-type double patenting as being unpatentable over claims 1-13 of applicant's prior US Patent No. 5,426,425.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1 and 49-71 generally broader than the claims in your patent. Broader claims
15 in a later application constitute obvious double patenting of narrow claims in an issued patent. See In re Van Ornum and Stang, 214, USPQ 761, 766, and 767 (CCPA) (the court sustained an obvious double patenting rejection of generic claims in a continuation application over narrower species claims in an
20 issued patent); In re Vogel, 164 USPQ 619, 622, and 623 (CCPA 1970) (generic application claim specifying "meat" is obvious double patenting of narrow patent claim specifying "pork").

Note that claim 49 of the instant application is word-for-word the same as that of claim 1 of applicant's patent except that it
25 lacks the two-bit pulse position scheme. Any limitations not included in the claims of the patent are considered to be obvious

in view of the prior art (Guest, Mufti, Haner, Warren, Radio Shack) as applied to the claims below.

Non-Statutory Double Patenting Rejection

3. Claims 1 and 49-71 are rejected under the judicially created
5 doctrine of non-statutory double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 5,426,425.

The subject matter recited in claim 1 and 49-71 of the instant application is fully disclosed in the Patent. The allowance of the claim(s) of the application would extend the
10 rights to exclude already granted claims 1-13 of the patent - that right to exclude covering the device comprising a locating and monitoring system and portable communication system. Because of the phrase "comprising," the patent claim(s) not only provides protection to the locating and monitoring system and portable
15 communication unit claimed in the patent, but extends patent coverage to the disclosed combination including additional features claimed in the instant application such as serial ports. Likewise, if allowed, the claim(s) of the application, because of the phrase comprising, not only would provide patent protection
20 to the claimed locating and monitoring system or transmitter and receiver combination, but would also extend patent coverage to include limitations such as the two bit pulse position code - already disclosed and covered by the claims in the patent. Note that claim 49 of the instant application is word-for-word the
25 same as that of claim 1 of applicant's patent except that it lacks the two-bit pulse position scheme. Thus, the controlling

fact is that the patent protection for the device, fully disclosed in and covered by the claims of the patent would be extended by the allowance of the claims in the application.

Furthermore, there is no apparent reason why applicant was prevented from presenting the claims in the application for examination during the prosecution of the issued patent.

In the parent application, it appears that claim 21 was canceled because it was directed to non-elected subject matter, but the reason for any restriction or election of species was not made of record. It appears that claim 21 is the only claim that was canceled for this reason. Nevertheless, claim 13 of the patent appears to correspond to the same limitations as the non-elected claim 21 of the parent and to the limitations of claim 64 of the instant application. Since the limitations were ultimately patented in claim 13, applicant was not prevented for presenting such claims for examination in the parent.

NON-STATUTORY DOUBLE PATENTING BASIS

4. The non-statutory double patenting rejection, whether of the obvious-type or non-obvious-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornam*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321 (b) and (c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78 (d).

Effective January 1, 1994, a registered attorney or agent of record may sign a Terminal Disclaimer. A Terminal Disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

ART REJECTION

5 5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

 A person shall be entitled to a patent unless --

10 (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15 6. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

20 A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25 Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

35 7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

8. Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 4,990,892 (Guest).

Guest discloses a personnel locating system with transmitters sending bursts to receivers at distinct burst periods to prevent synchronization. Each transmitter uses a different or divers period. The transmitters can be carried by people in order to locate them which is all that is required by the claiming of person, animal, or equipment in an alternative manner.

9. Claims 1, 49-50, 53-55, 57-65, 67, and 69-70 are rejected under 35 U.S.C. § 103 as being unpatentable over US Patent No. 4,990,892 (Guest) in combination with US Patent No. 5,363,425 (Mufti) and US Patent No. 3,403,381 (Haner).

Guest discloses a personnel locating system with transmitters sending infrared bursts to receivers at distinct burst periods to prevent synchronization as applied above to claim 1. Each transmitter uses a different or divers period. The transmitters can be carried by people in order to locate them which is all that is required by the claiming of person, animal, or equipment in an alternative manner. In Guest, each transmitter sends at specified periods rather than the varying intervals of claim 49. Further, Guest does not specify using an algorithm.

Mufti discloses an analogous art identification system which includes transmitters having microcontrollers which are provided with software or algorithms to provide the transmitter functions.

Haner discloses a system directed to preventing interferences between transmitters similar to Guest, but uses randomly varying repetition times rather than fixed times.

5 Regarding claims 49 and 65, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the functions of the Guest transmitter in response to an algorithm or software as described by Mufti since a software programmable device is easier and cheaper to mass produce and provides flexibility because the software can be modified to provide different functions. Alternatively, The transmitter in Mufti could have been modified to send infrared bursts as described by Guest which have advantages over RF transmission such as not requiring FCC licensing. If further would have been obvious to have included randomly specifying the transmission intervals as described by Haner which is advantageous for reducing interference when the number of transmitters is so large that they cannot each be assigned to a separate transmission interval. It would have been obvious to have specified the random period by an algorithm since the random pulses generator of Haner outputs a pulse at random times which is a representation of a random number provided by a randomizing algorithm and further because Mufti suggest using software or algorithms to provide all the transmitter operating functions (col. 7, lines 4-9) and Mufti describes random intervals for the burst transmission in col. 8, lines 1-3.

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Regarding claim 1, if the "diverse" periods are considered to

require the varying intervals of claim 49, then such is obvious as described in Haner for the same reasons applied to claim 49.

Regarding claim 50, Mufti discloses a microcontroller (61) responding to software or algorithms as discussed above.

5 Regarding claim 53, Guest discloses a unique sixteen bit binary codeword in col. 2, line 20, and it would have been an obvious design choice to extend this to any number of binary bits, such as 20 bits, in order to allow additional unique IDs for additional transmitter units up to 2 raised to the 20th power
10 = 1048576 units.

Regarding claim 54, the 20 millisecond burst is an obvious design choice which is suggested by the 55 millisecond burst period of Guest (cols. 8-9) which is at least of the same magnitude.

15 Regarding claim 55, the random intervals of Haner is between .5 and 1.5 seconds which would amount to an average interval of about one second.

Regarding claim 57, Guest includes a transmission of two infrared pulses of 5 microsecond duration for a total
20 transmission (high level) of 10 microseconds in col. 9, lines 50-52) which at least suggest a 10 microsecond flash.

Regarding claim 58, a plurality of receivers with allowable reception range overlap is described in col. 5, lines 1-26 of Guest, and Mufti includes validation aided by a CRC as discussed
25 above.

Regarding claims 59-60, Guest includes an up to date

registry and detecting presence and continued present in col. 3, lines 9-24 which corresponds to validating IDs and forming start and stop events when detected and lost.

5 Regarding claim 61, Guest includes connections between the central computer (44) and the gathering means (34) and it would have been obvious for these to include a plurality of serial ports since such is commonplace in the computer art.

10 Regarding claim 62, a terminal and keyboard for accessing data are commonplace in the art and are typically provided by a PC or workstation such as the workstation (18) of Mufti discussed in col. 5, lines 28-42 for accessing database (17).

15 Regarding claim 63, a display means for indicating reports stored at a central computer is commonplace in the computer art and is provided by the workstation of Mufti discussed above and/or the registry discussed in col. 3, lines 1-35 of Guest.

 Regarding claim 64, Guest includes a hospital environment with communication to existing nurse stations as discussed in col. 3, lines 9-21 and col. 10, line 66 - col. 11, line 15.

20 Regarding claim 67, Mufti discloses a CRC error correction word discussed above.

 Regarding claim 69, the CRC of Mufti is considered to be a binary checksum.

25 Regarding claim 70, the receiver of Mufti validates the CRC (col. 8, lines 59-60), and it is commonplace to validate the CRC by recalculating and comparing the CRC values.

10. Claims 1, 49-65, and 66-71 are rejected under 35 U.S.C.

§ 103 as being unpatentable over US Patent No. 4,990,892 (Guest) in combination with US Patent No. 5,363,425 (Mufti) and US Patent No. 3,403,381 (Haner) as applied above to claims 1, 49-50, 53-55,
5 57-65, 67 and 69-70 and further in view of US Patent No. 5,206,637 (Warren).

Regarding claims 1, 49-50, 53-55, 57-65, 67 and 69-70 if it is argued that these claims required a microcontroller with memory and microcode, then Warren suggests that such is obvious
10 for the reasons stated below.

EA
8/2/95
Regarding claim 51, Guest, Mufti, and Haner include unique ID's or addresses for the transmitters, and Mufti includes a microcontroller in the transmitter, but Mufti does not specify that the microcontroller includes a memory containing the unique
15 address. Warren discloses an access system with a microcontroller connected to a memory for storing access codes. See col. 4, lines 46-54. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the ID stored in memory associated with the
20 microcontroller as taught by Warren in the combination applied above since this would provide flexible (programmable) ID storage, and it further would have been obvious for this memory to be inside the microcontroller since making elements integral/separable and change in location of parts has been
25 established to be obvious by case law.

Regarding claim 52, Mufti describes that the software

instructions of the microcontroller provides for generations of a signal as shown in fig. 9 and col. 8 including a preamble (start bits), a binary ID code, and a CRC (checksum), but does not specify "microcode." Guest includes a unique 16 bit binary
5 codeword with start bit and parity. Warren discloses microcode for providing the instructions of the microcontroller (col. 4, lines 46-50) Therefore it would have been obvious to have included the transmission instructions of Mufti in microcode which is suggested by Warren to be an equivalent terminology for
10 the instructions of the microcontroller of Mufti.

Regarding claim 56, Mufti describes that the software instructions of the microcontroller in the receiver provides for validation of the received codes including the CRC shown in fig. 8 and col. 7. but does not specify "microcode." Warren
15 discloses microcode for providing the instructions of the microcontroller (col. 4, lines 46-50) including comparing and validating access codes. Therefore it would have been obvious to have included the receiver instructions of Mufti in microcode which is suggested by Warren to be an equivalent terminology for
20 the instructions of the microcontroller of Mufti.

Regarding claim 71, the receiver in fig. 8 of Mufti includes a microcontroller (82) which provides the validation and Warren teaches microcode as discussed above.

11. Claims 66 and 68 are rejected under 35 U.S.C. § 103 as being
25 unpatentable over US Patent No. 4,990,892 (Guest) in combination

with US Patent No. 5,363,425 (Mufti) and US Patent No. 3,403,381 (Haner) and US Patent No. 5,206,637 (Warren) as applied above to claims 1, 49-65, 67 and 69 and further in view of the "Understanding Data Communications" book by Radio Shack.

5 The Radio Shack book describes using multiple bits per baud in order to increase the signalling rate on a channel with a limited bandwidth that causes a fixed maximum baud rate. This can be implemented by providing a dibit in which two bits are communicated by each modulated pulse or sine wave depending on
10 the phase shift (position) of the wave as shown in table 5-4 or 5-6. Regarding claim 66, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a dibit in the combination applied above because the Radio Shack book states that this provides advantages such as
15 an increased signalling rate.

Regarding claim 68, it further would have been obvious to have provided the dibit for the CRC for the same reasons discussed above.

REMARKS

20 12. Applicant's arguments filed 4-13-95 have been fully considered but they are not deemed to be persuasive and/or are deemed to be moot in view of the new grounds of rejection.

Applicant's arguments are directed to the rejections made in the parent application. These arguments are not persuasive
25 and/or moot because the examiner has now applied references and reasoning specifically directed to the limitations of infrared

burst transmission, randomly varied transmission intervals, microcontrollers with microcode, dibit transmission, and other limitations which were asserted by the previous examiner to be obvious.

- 5 Regarding applicant's assertions that the examiner is only rejecting the "gist" of the invention, the examiner contends that general arguments asserting patentability cannot be persuasive. Applicant must point out the particular novelty which avoids the applied references.

10


CONTACT INFORMATION

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin Holloway whose telephone number is (703) 305-4818.

15

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4900.

Edwin C. Holloway
08-02-95


EDWIN C. HOLLOWAY, III
PATENT EXAMINER
GROUP 2200